

Mr. J. Taylor sent me some specimens alive which he had taken under stones in a field near Sandown, and which he thought must be *cupreus*. I went down to investigate, but we found the beetle very sparingly. Mr. C. J. C. Pool suggested (as no more could be found under stones) digging for the species, as he had found that a very good plan to get vars. of *aeneus*, and by this means *cupreus* was found in numbers. Over 80 specimens were taken by Beare, Mitford, Pool, Taylor, and myself. The history of the beetle as British appears to be as follows: Stephens recorded it from a single specimen said to have been taken near London on the banks of the Thames (this is probably incorrect, as the species has never been found in Britain since, except in the Isle of Wight, and like several other south European species, is peculiar to the Island, such as *Cryptocephalus bipunctatus*, type form, *Baris analis*, *Cathormiocerus socius*, etc.). Dawson recorded that it was very rare in Britain, and that he only found it at Ryde, Cowes, and Sandown, in the Isle of Wight. Fowler gives these same three localities and mentions that Mr. Horner took it not long ago at Sandown. In July, 1888, Champion recorded it as plentiful beneath stones on the margin of a cornfield at Sandown. In 1897 Lloyd found it very scarce and sparingly in the same spot. In 1898, Champion could not find it again. In May, 1899, Ellis took one specimen under a stone at Bembridge. In August, 1900, Taylor took a very fine ♀ with all red legs and antennæ at Alverstone. This most unfortunately was named *aeneus* for him by the authority he sent it to, and has been seen since by another so-called authority; it very naturally much discouraged him, as he had made it out to be *cupreus* himself. However, he has the consolation of turning the beetle up again now, and Pool is to be congratulated on the great success of his plan. Ganglbauer gives the whole of south Europe for its distribution, and the last European Catalogue—Mediterranean; France, west; Britain; and Caucasus.

### **Nonagria edelsteni, Tutt.—A Noctuid New to the British List.**

By J. W. TUTT, F.E.S.

It is most interesting to have a new British Noctuid to chronicle, especially a species about which so much doubt and uncertainty have been rife. Only so recently as July last (*Ent. Rec.*, xx., pp. 164 *et seq.*). I drew attention to this insect and its ally, *N. neurica*, Hb., and pointed out that Mr. Edelsten agreed with Schmidt and Staudinger that there were two allied species on the Continent of Europe characterised as—

Collar white.  
Central streak blackish, containing three white dots, the outer one forming the central spot.  
Underside quite plain, with no markings.

Collar same colour as body.  
Central streak blackish, no white dots, central spot black, encircled, or partly so, with white.  
Underside showing the central spots and marginal lunules.

—and which he called respectively *neurica*, Hb., and *arundineta*, Schmidt. I further pointed out that Hübner's fig. 381 (the typical figure of *neurica*) failed in all these characters, (1) the collar is not white, (2) the central streak does not contain three white dots, (3) the underside is not shown, and, therefore, the insect with these characters does not

agree with the figure of Hübner. On the other hand, I observed that, in Hübner's figure, the collar is (1) of the same colour as the body, (2) the central blackish spot (the lower part of the reniform) is encircled with whitish, and that, on these characters, the figure must be held to coincide with what Schmidt called *arundineta*, and not with what he unfortunately called *neurica* (see pl. xxi., figs. 6-9), where this character is well shown. The comparison of Hübner's fig. 381 with Edelsten's summaries of the descriptions of Schmidt's two species, clearly shows that—

*Neurica*, Hb., fig. 381 = *arundineta*, Schmidt—

whilst *neurica*, Schmidt, is, on the characters given, a distinct species (I long ago considered, probably only a variety) which I named, in July last, *edelsteni*. It is this latter species, with (1) white collar, (2) three white dots placed longitudinally, (3) with unspotted underside, which has lately been added to our fauna by Messrs. Wightman and Sharp, who captured a large number of examples in the Cuckmere Valley of Sussex, on July 22nd; *Nonagria neurica*, Hb., having been added to the British list by Bond in 1845 (*Zoologist*, 1845, p. 1881).

Assuming Schmidt to be the first author to really differentiate the species, we append from Edelsten (*Ent. Rev.*, xix., p. 34), the translation of that part of Schmidt's description, that applies to this species. Erroneously assuming that *neurica*, Hb. (fig. 381), differed from *neurica*, Hch.-Sch. (figs. 347, 348), both as seen from the figures really being referable to the species with the dark lower half of the reniform pale-ringed, an error for which Schmidt may certainly be fairly excused, as he himself observes—

"I cannot compare Hübner's illustration for the present; I have seen it but once, and only remember to have recognised it by my first variety. Herrich-Schäffer's successful illustrations decidedly represent my second variety—*arundineta*."

He writes of the two forms as follows (*Stett. Ent. Ztg.*, xix., pp. 367-370):—

Although the two forms are very similar to each other, yet they are, in many respects, stable, and so different that I am, for instance, never in doubt as to which of the two forms the specimen belongs. Both forms vary considerably in colour, and in a similar way; but the former does not do so to the same extent or so frequently as the latter. The size, shape of the wings, and markings are almost the same in both. The difference in colour and markings is not so noticeable as is the much weaker build of the body in Hübner's form\* compared with mine †, although the length of the body and the size of the wings may be the same in both forms. This is more strikingly shown in living specimens than in dried ones. The first form has a white-bordered collar, and the latter† an unicolorous one. The wings appear wider in the former,\* and the ground colour of the forewing is usually yellowish reed-coloured; in the latter form † it is, on the whole, darker—greyish, brownish, reddish, and yellowish, in stronger gradations. The males, especially, differ in having the dark longitudinal stripe, in the middle of the forewing much weaker in the former variety,\* and the spots in it are only indicated below by a pair of white points, while the longitudinal shade is stronger in the second variety,† and the reniform is generally quite visible. Furthermore, the underside of the latter† form is distinguished by a sharp and stable central lunule on all wings, as well as by some marginal marks, as against the former,\* which has no mark here except the arched line. The former variety,\* appears some three to four weeks before the latter,† and flies singly about reeds in the evening in several localities. Although not scarce in some localities, the other† is only to be found in two localities situated near one another, and most frequently occurs here, as a larva, together with that of *paludicola*. But their number has of late been smaller there year by

\* i.e., our *edelsteni*. † i.e., *arundineta*, Schmidt (= *neurica*, Hb.).

year, while the former form\* seems to have multiplied and spread in the same proportion. Their flight, too, is essentially different. While the former variety\* flies easily and more slowly, the other one shoots away with more powerful flight, almost like *paludicola* and *nexa*. I have bred Herrich-Schäffer's form† for several years, and also communicated special facts about their habits, which correspond in their essential parts with Treitschke's statement, and in my addendum to "Uebersicht Mecklenb. Lepidop." (*Archives of the Society of Friends of Natural History in Mecklenburg*, v., pp. 137 *et seq.*). On the other hand I have, so far, obtained Hübner's variety\* almost exclusively by catching, and only lately observed it more closely, and have only bred it singly from the pupa. As regards its larva, which I am certain I have often seen, although I am not certain of having bred the moth from it, I beg to point out that I scarcely noticed any difference between the two in their way of living, and in their general build, except that they appeared considerably earlier, and were always met with singly in other localities. Also, after very closely examining two pupæ found here a few years ago, I did not notice that they differed from the more robust variety except that they appeared somewhat thinner and more greenish-yellow, and were also lying in the reed-stem somewhat higher from the ground (some widths of the hand above the water) than seems to be the rule with the others. From one of these pupæ a fine ♀ of the first variety\* emerged very late in the season\*\*, and, at the same time a ♂ of the other species† appeared. I availed myself of this fortuitous event, which I had long desired, to try whether the two varieties would copulate, which I always noticed took place in the case of the more robust variety†, as soon as both sexes were together in the receptacle, and mostly immediately after development. Being placed together, they did not appear to be inclined that way, although they were flying together for two evenings. Now what especially confirmed my belief that the two were different species, was when, on the third evening, a ♀ of the second variety† came out, with which the ♂ copulated at once. From all this, I think I am entitled to the assumption that the two varieties referred to, previously united as *neurica*, are two different species, even if, on closer examination, their larvæ and pupæ should not visibly show much difference. The name *neurica* must remain with the older Hübnerian variety, and the other, Herrich-Schäffer's variety, must, therefore, have a new name. As this one occurs deeper in the reed-bed, more in the thicket of it, I call it *arundineta*.

It is unfortunate that, neither Schmidt nor Herrich-Schäffer, to whom Schmidt says that he submitted specimens, observed that Hübner's fig. 381, was wanting in the characters—"white collar," "white dots along centre of wing," and "unspotted underside" which were insisted on by Schmidt (and so clearly designated in *edelsteni*, see pl. xxi., figs. 1-5). and that, therefore, the really new species was not *neurica*, Hb., but that both *neurica*, Hb., and *neurica*, H.-Sch., had got the collar coloured uniformly with the thorax, and the dark lower part of reniform pale-ringed (see pl. xxi., figs. 6-9), and that both were the same species which Schmidt renamed *arundineta*.

It has been suggested that this description of Schmidt's is not the earliest referable to our newly-discovered (in Britain) and recently-named *edelsteni*, and that a remark in that part of Treitschke's description of *neurica*, Hb., in which he refers to *dissoluta* (*Die Schmett. von Europa*, v., pt. 2, p. 319) involves an earlier description. Treitschke heads his species:

#### NEURICA.

*Non. alis anticis flavo vel fusco ferrugineis, vena maculaque medio albicantibus, serie punctorum nigrorum ad marginem externum.*

Hübner, "Noct.," tab. 82, fig. 381 (♂).

Hübner, "Noct.," tab. 144, figs. 659-660 (♂), fig. 661 (♀) *N. neurica*.

\* i.e., *edelsteni*, Tutt. † i.e., *neurica*, Hb.

\*\* This fact suggests, in comparison with the earlier statement that *edelsteni* occurs some three or four weeks earlier than *neurica*, that there is some overlapping as one might suppose.

This description can leave no manner of doubt that this belongs to *neurica*, Hb., 381, and *arundineta*, Schmidt. He then goes on to say (*op. cit.*):

Ochsenheimer has referred to Hübner's *neurica* on p. 82 of his *Entwurf*, and understood by it the reed-coloured form without marks on the underside, of which there were a few examples in Mazzola's and his own collections under this name, and which came from the Rhine district.

Now one might suppose from this that Ochsenheimer had written somewhere the suggestion in this paragraph, but, on referring to the *Entwurf*, p. 82, one finds that all Ochsenheimer chronicles is as follows:

Genus lxxviii: NONAGRIA.

*Uvae*, O. nov. sp.

*Fulva*, Hübner. mas (*Extrema*, Hübner., foem.).

*Phragmitidis*, Hübner. (*Semicans*, Esp.).

*Neurica*, Hübner.

*Sparganii*, Hübner., Esp., Borkh.

The observation, therefore, is merely Treitschke's, and, being made some nine years after Ochsenheimer's death, is a mere expression of opinion of the latter's view of the insects being dealt with at the time, based on a conversation, specimens exchanged, specimens in a collection, or something similar, and Treitschke may, or may not, be referring to our *edelsteni*, as he mentions none of the characters relied on by Schmidt later, except "the unspotted underside," which, unfortunately, can never be taken into account in considering Hübner's figure as it does not show it, and which, at any rate, whatever its value, is stultified as an opinion of Treitschke's, by the latter's diagnosis of *neurica* (*suprà*), and further description (*infra*) which clearly refer to *arundineta*, Schmidt. Treitschke (*op. cit.*) then goes on to say—

Later, we received from thence some very much darker moths, marked on the underside, under the name *N. dissoluta*. They agreed exactly with Hübner's figs. 659-661. It therefore seemed certain that Hübner had repeated the name *neurica* by mistake, whereas *dissoluta* should have been given instead.

This is the first reference to *dissoluta*, and clearly refers wholly and solely to the dark aberrations of *N. neurica*, Hb., figs. 659-661, and has nothing to do with the newly-named species. Continuing, he notes (*op. cit.*)—

Further consignments have, since then, conclusively proved that Hübner was right to call all the forms *neurica*, whether marked above, dark or light, and underneath with or without black markings; all are connected by the slightest gradations, and, furthermore, it confirmed what had already been said about the variability of this plain-looking creature. *Neurica* varies in tone from reed-coloured to the deepest yellowish dark-brown, as do also *paludicola* (*geminipuncta*), *typhae*, and others. The head and thorax are coloured like the forewings, the abdomen is lighter, inclining towards grey, that of the ♂ especially long and slender, with yellowish-brown anal tuft. The antennæ are bright yellow, fine, serrate in the ♂. Legs brown-yellow. The forewings are short, broad, pointed at the apex. They vary as mentioned, so much so that the intermediate form connecting the two varieties has lighter and darker parts. On all which are not quite without marks, the broad outer margin is the lightest, and without the black specks which irregularly cover the other parts. The median vein is white longitudinally, bordered with black. Beyond the middle of the wing is a black dot with white bordering which is sometimes formed like a figure 3, very rarely with no margin. Before the outer margin a more or less defined double row of dots crosses the vein; there are two dots next to the inner margin, and there is a row of black and white streaks in the other part of the shaded band where the wings usually become darkest as far as the fringes. These are bordered with clear black dots, otherwise lighter than the ground colour and simple. The hindwings are yellowish-white towards the base, more or less dusted with grey posteriorly, with the lunules



and smaller lunular marks as a border to the whitish fringes. The underside is yellowish, grey dusted, sometimes unmarked, sometimes with central spots and dots before the fringes, often also with a curved line and a shade almost forming a band before it. The larva is dirty-white with pale red back, lives in the interior of the reeds, and changes in June or July to a pupa, head downwards. The moth appears in four weeks (according to information from Herr Hess, of Darmstadt). In mode of living and changing it resembles the following species, *paludicola* (*geminipuncta*). I only know the district of Darmstadt as its habitat, and there the moth is rather rare.

This long statement refers to *neurica*, Hb., as Treitschke understood it, and he states clearly that his *neurica* varies in tone from reed-colour to the deepest yellowish dark-brown, as do also *paludicola*, *typhae* and others," a fact we know to be true of *neurica*, Hb. (= *arundineta*, Schmidt), but of which we have no evidence up to the present moment of *edelsteni* (i.e., *neurica*, Schmidt), although some ♂s are heavily dusted with blackish. There may be in Treitschke's long statement a suspicion that he may have had *edelsteni* mixed with his *neurica*, but the main features of his general description, like his Latin diagnosis, are applicable only to the latter, and his larval description distinctly refers to *neurica*, Hb. = *arundineta*, Schmidt. Duponchel in 1840, and Herrich-Schäffer in 1845, refer the species we know as *neurica*, Hb., correctly to *neurica*, and Boisduval, in 1840, certainly does the same, although he queries whether the dark form of *neurica* is specifically identical with the pale form of the same species, and describes the dark form Hb. 659 (already referred to by Treitschke as *dissoluta*), and renames it *hessii*, Bdv. He wrote:—

"No. 1081. *Hessii*, Boisd. (an var. *neuricae*?). *Neurica*, Hb., 659. Alæ anticæ nigro-fuscae, macula reniformi albida, intus fusca; alæ posticæ pallidæ. Dom. Hess, qui abunde Nonagrias circa Darmstadt educit, mihi ut variet *neurica* hanc speciem misit. Dom. Treitschke quoque in synonymia ad *neuricam* genuinam refert. An rite?"

Herrich-Schäffer, whilst rightly complaining of the poorness of Hübner's figures, had no doubt about the species, and his descriptions speak for themselves:—

"No. 189. *Neurica* Hb. 381.—Totally defective in its outlines, forewings much too large. Fusco-testacea loco stigmatis reniformis annulo albo, fusco repleto. Hindmargin with sharply marked black lunules between the nervures, the outer transverse line indicated by black dots which are shown up by white on both sides. Dark reed-colour, a longitudinal darker ray through the middle of the forewing, before this, towards the costa, some black dots, two indicating the position of the central spot, the third indicating the inner boundary of the front half of the reniform. Hindwings lighter, without markings. Around Darmstadt, August."

"No. 187. *Hessii*, Boisd.; *neurica*, Hb. 659-61.—Much too robust, outline of the forewings defective. Fuscoferruginea, stigmatibus reniformibus versus limbum et marginem interiorem albocincto. Differs from *neurica* in appearance only by the reddish-brown colour of the forewings. The central spot extending more towards the outer margin, its form seems more like the usual reniform, the three dots, however, on its outer border are missing. Darmstadt."

The description of the reniform in Herrich-Schäffer's examples, "surrounded by whitish, filled in by fuscous," agrees with Hübner's figure, and is the exact opposite to that of *edelsteni*, which is "surrounded with dark, filled in by white." Besides, the whole of the remainder of the descriptions refers unquestionably to *neurica*, Hb. = *arundineta*, Schmidt, as also do the descriptions of Guenée (1852), and Stainton (1857).

So far then, and up to 1858, when Schmidt discriminated the two insects, in the account given in the commencement of this paper, there had been no suspicion of two species being included under the name except

that the ordinary form and the dark form had been noted separately, and the latter had been referred to in 1825 as *dissoluta* by Treitschke, and *hessii* by Boisduval and Herrich-Schäffer.

It is true that Treitschke notes, nine years after Ochsenheimer's death, that Ochsenheimer considered specimens "without marks on the underside" to be *neurica*, Hb. It is clear that the point can prove nothing scientific, as Hübner's figure shows no underside, and, in science, what Treitschke says "Ochsenheimer considered," surely cannot carry any weight, as Ochsenheimer himself writes nothing, publishes nothing, on the matter, and, if Ochsenheimer did consider an insect, "without marks on the underside," to be Hübner's *neurica*, it still remains the fact that the upperside of Hübner's figure carries none of the characteristic marks of *edelsteni*, having neither a "white collar," nor "the white spots along the centre of the wing," most constant features of all the examples captured by Messrs. Wightman and Sharp, as well as those figured by Edelsten (pl. xxi., figs. 1-4). Much stress has been laid on the fact that, in 1869, Staudinger (*Stett. Ent. Ztg.*, xxx., p. 88) wrote:—

In Ochsenheimer's collection there is a genuine *neurica*, Hb., fig. 381, designated as such by a label written with his own hand. Underneath a typical *arundineta*, Schmidt, is placed, and provided with a label, on which is the following, written in Ochsenheimer's handwriting: 'An eadem cum præcedente? sub nomine *Noctua dissoluta*.' In Treitschke's collection there are, under the label *neurica*, five specimens, the first of which is a *neurica*, Hb., 381, the second, third, and fourth are *arundineta*, Schmidt, and the fifth is a dark variety of *neurica*, Hb., figs. 659-661, subsequently, *hessii*, Boisd.

That is (allowing everything for what it has been said Staudinger meant and not what he wrote), 53 years after Ochsenheimer's death, there was a specimen of *edelsteni* (*neurica*, Schmidt), with a label on it in Ochsenheimer's handwriting (*teste* Staudinger), referring it to "*neurica*, Hb., fig. 381." Now for the purpose of science, one might ask many pertinent questions about a specimen in a man's collection 53 years after his death; one might also ask if this specimen was really *edelsteni*, whether it had the "white collar," and the "three white spots along the centre of the wing" after typical examples of *edelsteni* (= *neurica*, Schmidt), or the dark reniform surrounded by pale (= *arundineta*, Schmidt), after the figure of Hübner, to which Staudinger refers it, and finally, one might then ask whether, if Ochsenheimer did really (by label) refer a specimen of *edelsteni*, with typical markings, that was in his collection, to *neurica*, Hb., and erroneously put on it a label which might be considered as expressing an opinion (but published nothing about it) whether it has anything whatever to do with our consideration of Hübner's figure? This latter is as available to us to-day as to all the entomological authors who rightly referred it to the species that Schmidt renamed *arundineta* (Treitschke, Duponchel, Boisduval, Herrich-Schäffer, Guenée, Stainton, etc.), and whose synonymy and conclusions, Schmidt, a collector, evidently without Hübner's work for reference, so thoroughly upset.

There are many points in my previous writings that I did not fully appreciate about *edelsteni* in the flesh, till I saw the very long series exhibited by Mr. Wightman recently at a recent meeting of the Ent. Soc. of London (I had previously only seen a single example shown me by Mr. Edelsten). But, through them all, I have consistently urged and been convinced that *neurica*, Hb., with the dark reniform,

ringed with pale, was *arundineta*, Schmidt. I have now shown that whatever Ochsenheimer may have thought about *neurica*, Hb., he published nothing, and that we cannot (for scientific purposes) deal with a man's thoughts 90 (or even 9) years after his death. I have also shown that Treitschke, even if he knew of *edelsteni*, combined it with *neurica*, and treated it as a variety thereof, certainly he never suggested that the species he diagnosed was not *neurica*, Hb.

We have, therefore, a long series of authors—Hübner (1802 and 1818), Treitschke (1825), Duponchel (1840), Boisduval (1840), Herrich-Schäffer (1845), Guenée (1852), and Stainton (1857), all figuring or describing an insect with dark reniform ringed with pale, complaining of the general colouring, etc., of Hübner's figure 381, but having no doubt about the species.

Then, in 1858, we have Schmidt referring our *edelsteni* to *neurica*, Hb., with the statement (already quoted): "I cannot compare Hübner's illustration for the present; I have seen it but once, and only remember to have recognised by it my first variety." This was the *first* real actual statement on specimens that was ever made in doubting that Hübner's figure did not represent the pale-encircled dark-reniform species, except the remark of Treitschke that Ochsenheimer "considered Hübner's fig. 381 to represent the unspotted-underside form," an opinion that Ochsenheimer certainly never put into words. The *second* statement in the same direction on actual specimens came from Staudinger (*Stett. Ent. Zeitg.*, xxx., p. 88) who asserted, 53 years after Ochsenheimer's death, that "Ochsenheimer had already correctly surmised the last-named [of (1) *neurica*, Hb., 381, (2) *arundineta*, Schmidt, (3) the dark variety of *neurica*, Hb., figs. 659-661], to be another species, viz., *arundineta*, Schmidt (see *Ent. Rec.*, xix., p. 56), which is just what it is. Staudinger further adds that there was in Ochsenheimer's collection one "genuine *neurica*, Hb., fig. 381," and in Treitschke's collection was "one *neurica* Hb., fig. 381," i.e., so far as we know until Schmidt obtained specimens—two examples only of what Staudinger (following Schmidt) calls "true *neurica*," and which we now consider to be *edelsteni*, although, even till the present moment, these specimens, of which so much has been made, appear never to have been described except as the "unspotted-underside variety."

The form with white collar, three white dots along central shade, and unspotted underside, therefore, never had been named, until we named it (*Ent. Rec.*, xx., p. 164).

It would be possible to waste much time and space in discussing probable meanings of many things written by entomologists (including ourselves), but there are only two questions that entomologists need ask who have to deal with the insects:—

(1) Does Hübner's fig. 381 represent an insect with dark reniform, edged with pale (= *arundineta*, Schmidt), or one with a white collar, and three white dots along the centre of the wing (= *edelsteni*, Tutt)?

(2) Can Treitschke's statement of what Ochsenheimer thought, or can the insects Staudinger found 53 years later in Ochsenheimer's collection have any scientific bearing on whether Hübner's fig. 381 should be referred to an insect with a white collar and three white spots along the centre of the wing (characters which it does not possess), or to one with a dark reniform with pale circumscription (which it does possess)?

Simple questions, like these, would appear to be capable of carrying simple answers, but it appears they are not. At any rate, "genuine" or "true" *neurica* of which we have heard so much, are those with "a dark reniform surrounded with pale" (*teste* Hübner's figure). They include all our former British specimens, those sent out from Hunts and Cambs as *neurica* (following Stainton), and those sent out from Norfolk, Essex, and elsewhere as *arundineta* (following Newman). Field lepidopterists want to know whether their specimens agree with the original figures and descriptions of the names they bear, and if they do not, are hardly likely to be satisfied with "an opinion" or "ipse dixit" that the species is so and so, backed up by reasoning on literature which does not affect the point at issue, or include a first-hand consideration of the original figure.

We are taking the liberty of again reproducing the plate which illustrated Mr. Edelsten's excellent article last year (*Ent. Rec.*, xix., nos. 1-3). We can only repeat that we appear to agree entirely with all Mr. Edelsten's quoted facts, we only disagree with his primary conclusion.

## EXPLANATION OF PLATE XXI.

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|------|--|---|
| 1.   | <i>Nonagria edelsteni</i> , Tutt.                    | ♂, taken by Schmidt.                                    |
| 2.   | " "  | ♂, from Professor Stange.                               |
| 3-4. | " "  | ♀, " " " "  |
| 5.   | " "  | ♂ (underside), taken by Schmidt.                        |
| 6.   | <i>Nonagria neurica</i> , Hb.                        | ♂, taken by Schmidt.                                    |
| 7.   | " "  | ♀, " " " "  |
| 8.   | " "  | ♂, from Norfolk Broads.                                 |
| 9.   | " "  | ♀, from Central Asia.                                   |
| 10.  | " "  | ♂ (underside), from Norfolk Broads (slightly enlarged). |
| 11.  | Ova <i>in situ</i> of <i>Nonagria neurica</i> , Hb., | from Norfolk Broads.                                    |
| 12.  | " " " "  | " " " " (×15 diameters).                                |

### Clambus punctulum, Beck., a British species.

By H. ST. J. K. DONISTHORPE, F.Z.S., F.E.S.

*Clambus punctulum*, Beck., was described and figured in the *Beiträge zur bayerischen Insektenfauna*, Augsburg, 1817, p. 8, plate i., fig 4. The description reads:—"Ater, nitidus, subacuminatus, pedibus fulvis, elytris pilosellis. Black, shining; the legs gold-yellow, the elytra furnished with sparse, extremely delicate, little hairs. The head and thorax are very bent, the abdomen strongly acuminate. The outline of the body distinguishes it easily from *Herr Sturm's atomarius*" (= *C. armadillo*, de Geer). I captured a specimen at Chattenden, on July 21st, by evening sweeping in company with *Cyrtusa minuta* and *Anisotoma badia*. Fowler writes (*Col. Brit. Isles*, vol. iii., p. 12):—"A fourth species, *C. punctulum*, has been included in the British list, but has been dropped, as the specimens on which it was introduced appear to be only small *C. minutus*."

Ganglbauer refers (*Käfer von Mitteleuropa*, vol. iii., p. 259) to *punctulum* as follows:—"Comes very close to *minutus*, from which it is only distinguished by its smaller size. The differences given by Reitter in the length of the last joints of the antennæ (by *minutus* much longer, by *punctulum* as long as broad) I do not find confirmed. The colour is variable as in *minutus*. Long. 0.6mm. 0.7mm. Europe, Mediterranean. Rarer than *minutus*." He treats it as a good species.